

**Features**

- High Frequency Operation
- High Current Capability, High Efficiency
- Halogen Free. "Green" Device (Note 1)
- High Junction Temperature Capability
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 5°C/W Junction to Case
- Typical Thermal Resistance: 22°C/W Junction to Ambient(Note 3)

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRD10100CTH	MBRD10100CTH	100V	70V	100V
MBRD10150CTH	MBRD10150CTH	150V	105V	150V
MBRD10200CTH	MBRD10200CTH	200V	140V	200V

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Average Forward Current	$I_{F(AV)}$	10A	$T_C=130^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	120A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	0.8V 0.85V 0.9V 0.84V	$I_{FM}=5A; T_J=25^\circ\text{C}$ $I_{FM}=5A; T_J=25^\circ\text{C}$ $I_{FM}=5A; T_J=25^\circ\text{C}$ $I_{FM}=5A; T_J=125^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	0.01mA 5mA	$T_J=25^\circ\text{C};$ $T_J=125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	100pF	Measured at 1.0MHz, $V_R=4.0V$

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High temperature solder exemption applied, see EU directive annex 7a.

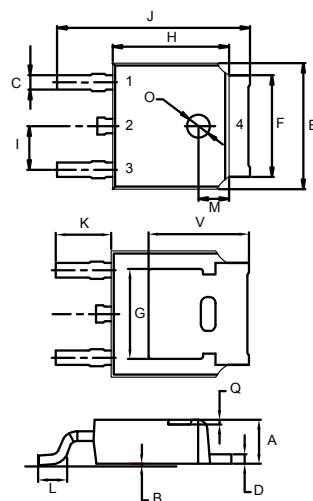
3. Test with 2in. Al board.

**Internal Structure:**



**10 Amp  
Schottky  
Barrier Rectifier  
100 to 200 Volts**

**(TO-252) DPAK**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

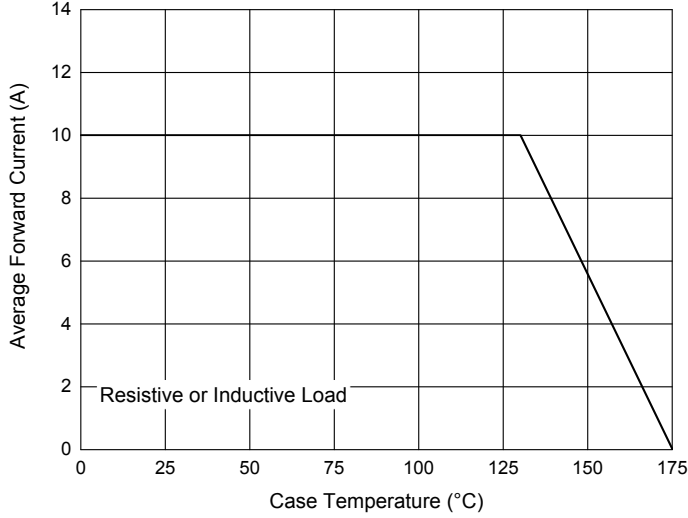


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

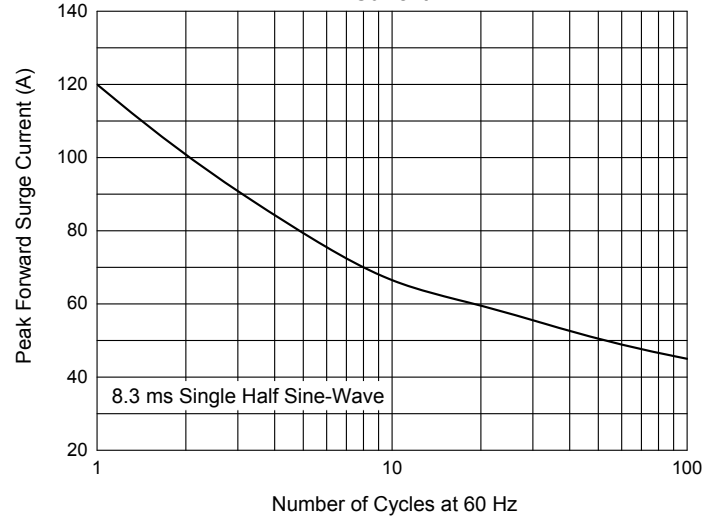


Fig. 3 - MBRD10100CTH Typical Instantaneous Forward Characteristics

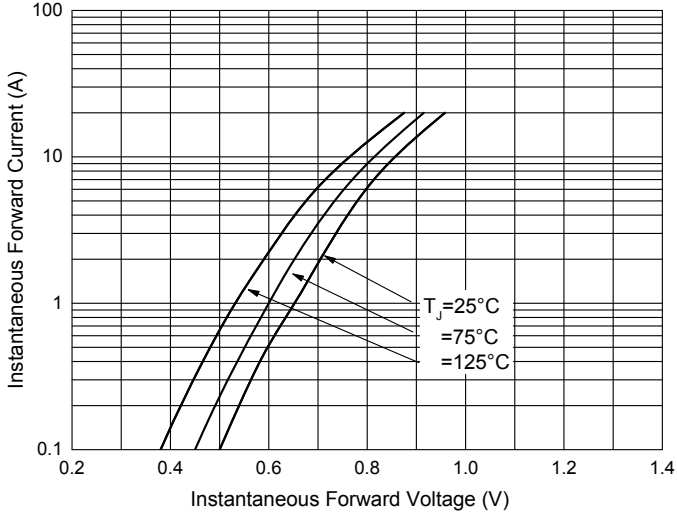


Fig. 4 - MBRD10150CTH Typical Instantaneous Forward Characteristics

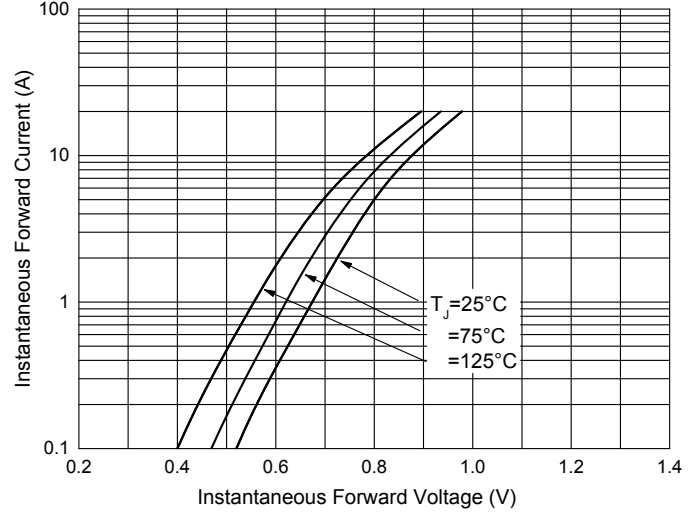


Fig. 5 - MBRD10200CTH Typical Instantaneous Forward Characteristics

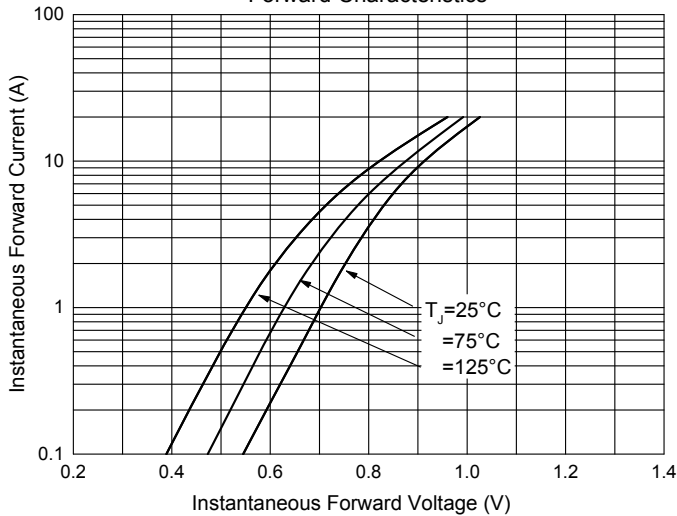
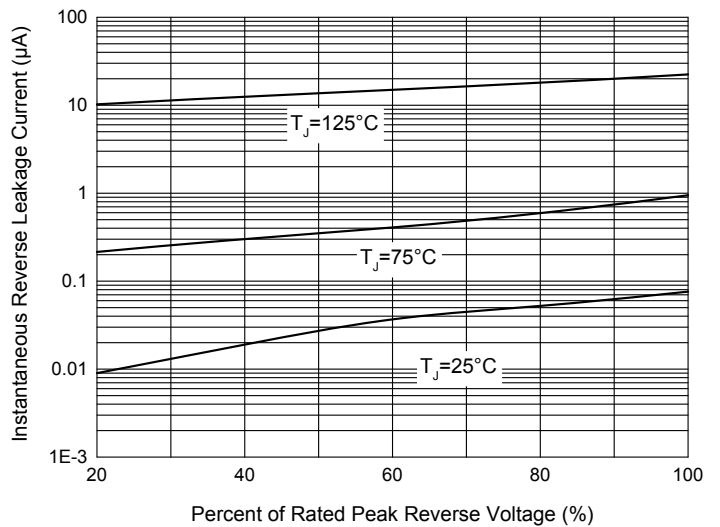


Fig. 6 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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